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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. | | | | | | | | | | | | |
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| 10/763,787 | 01/23/2004 | Frederick Browne Gregg | 64906-CON1 | 7948 | | | | | | | | | | | | |
| 7590 Christopher F. Regan Allen, Dyer, Doppelt, Milbrath, Gilchrist, P.A. P.O. Box 3791 Orlando, FL 32802-3791 | | 10/25/2007 | <table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">CHIMIAK, EMILY ANN</td></tr><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td>1791</td><td></td></tr><tr><td>MAIL DATE</td><td>DELIVERY MODE</td></tr><tr><td>10/25/2007</td><td>PAPER</td></tr></table> | | EXAMINER | | CHIMIAK, EMILY ANN | | ART UNIT | PAPER NUMBER | 1791 | | MAIL DATE | DELIVERY MODE | 10/25/2007 | PAPER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/763,787

Applicant(s)

GREGG ET AL.

Examiner

Emily Chimiak

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 61-63, 65-74, 77 and 78 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 61-63, 65-74, 77 and 78 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Claim Interpretation

It is assumed that the word "cutting" in claim 77 line 2 reads on "dividing" from figure 12 so that claims 77 and 78 fall into the same species.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 61-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blom '457 in view of Teare '413 and Emerson '954.

Blom discloses a method of manufacturing aerated concrete sheets, said method comprising: dispensing materials for making aerated concrete into a mold and allowing the materials to rise and stiffen into a body; dividing the body into a plurality of uncured sheets having opposing first and second major surfaces to serve as the core material; cutting the core material into a plurality of uncured second sheets; and curing the uncured wallboard or backerboard sheets in an autoclave (figures 1, 2, 4; column 4, line 6 – column 6, line 50). The

Art Unit: 1791

reference is silent as to a method wherein face sheets are added to the major faces of the core material before cutting occurs.

Both Teare and Emerson disclose a method of manufacturing a wallboard or backerboard, said method comprising securing first and second paper face layers to first and second major surfaces of a core of concrete material, and then cutting said face layers and core material to form a wallboard or backerboard and curing said wallboard or backerboard in an autoclave. The addition of the face layers strengthens and reinforces the concrete core. Therefore, at the time of invention it would have been obvious to a person of ordinary skill in the art to modify Blom such that first and second face sheets are secured to the major surfaces of the concrete core to form a wallboard or backerboard before curing as taught by Teare and Emerson above. Such a modification to Blom would improve the strength of Blom's product.

In one embodiment, Blom discloses that a carriage carries the cut blocks at the receiving support (3) to another station (col. 3 lines 28-30), but is unclear when the face layer is to be applied, whether before or after curing. However, Emerson discloses that it is advantageous in the art of reinforcing cement containing products to apply the reinforcing sheet while the material is in the plastic state in order to integrate the sheet to the cement to make the product waterproof (Emerson page 1 lines 78-90). It would have been obvious at the time of invention to one of ordinary skill in the art to secure the paper of Blom as modified by Teare and Emerson before the curing step because Emerson teaches that applying the reinforcing sheet before curing waterproofs the product more effectively.

As to claims 77 and 78, Blom et al. it is unclear whether Blom discloses the sequence of steps from Figure 12 disclosed by applicant, namely dividing into uncured sheets, securing face

Art Unit: 1791

layers to uncured sheets, curing wall or backerboard sheets and finally cutting wall or backerboard sheets. However, Mitchell et al. teaches that it is known in the art to cut a cast concrete structural member after curing (col. 1 lines 55-63). It is noted that one reading Blom et al. as a whole would readily appreciate that the time at which cross-cutting is performed is not crucial to the invention because in one embodiment the concrete blocks arrive at the autoclave before the cross-cutting step (col. 3 lines 29-31). It would have been obvious to one of ordinary skill in the art to first cut the planks, then cure, then cross-cut in the method disclosed by Blom et al. because Mitchell et al. teaches that it is known in the art to cut the planks after curing and the order of curing and the cross-cutting step is not critical in Blom et al. as evidenced by the embodiment wherein the concrete blocks are sent to the autoclave.

4. Claims 65 and 68-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blom, Teare and Emerson as applied above, and further in view of Lawlis '333.

Blom, Teare, Emerson disclose a method as discussed above but the references are silent as to a method wherein longitudinal edges are beveled. Lawlis discloses a method of manufacturing a wallboard comprising a core with two face sheets, wherein longitudinal edges are beveled for easier installation of the wallboard (column 1, line 36 – column 2, line 2, figure 1). Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to bevel the edges of the wallboard disclosed by the combination of Blom in view of Teare and Emerson in order to simplify installation as disclosed by Lawlis above. Claims 68-70 do not contain any limitations different from those required by claims 61-63 and 65 and thus

Art Unit: 1791

the combination of references renders the limitations of claims 68-70 obvious for the reasons discussed above.

5. Claims 66 and 73-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blom, Teare and Emerson as applied above, and further in view of Mathieu '409.

Blom, Teare and Emerson disclose a method as discussed above, but the references are silent as to a method wherein the face layers are extended around the opposing longitudinal side edges. Mathieu discloses a method of manufacturing a wallboard with face layers attached to the first and second major surfaces of a core, said layers further including a side member 36 that extends around the opposing longitudinal side edges (column 21, line 9 – column 22, line 17). Said side member provides strength for the edge regions (column 2, lines 48 – 51). At the time of the invention it would have been obvious to a person of ordinary skill in the art to extend the face sheets of Teare and Emerson around the side edges of Blom's board in order to strengthen the side edges as taught by Mathieu above. Claims 73-74 do not contain any limitations different from those required by claims 61-63 and 66 and thus the combination of references renders the limitations of claims 73-74 obvious for the reasons discussed above.

6. Claims 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blom in view of Teare and Emerson as applied above, and further in view of King '620.

Blom, Teare and Emerson disclose a method as discussed above, but the references are silent as to a method wherein the aerated concrete is fiber reinforced. King discloses a method of manufacturing aerated concrete to be used as a backerboard and further discloses reinforcing said aerated concrete with fibers in order to increase the strength of said concrete (column 1, lines 38 – 44, column 2, lines 54- 58). At the time of the invention it would have been obvious to a

Art Unit: 1791

person of ordinary skill in the art to modify Blom such that Blomm's concrete is fiber reinforced for increased strength as taught by King above.

7. Claim 72 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blom, Teare, Emerson and Lawlis as applied above, and further in view of Mathieu '409.

Blom, Teare, Emerson and Lawlis disclose a method as discussed above, but the references are silent as to a method wherein the face layers are extended around the opposing longitudinal side edges. Mathieu discloses a method of manufacturing a wallboard with face layers attached to the first and second major surfaces of a core, said layers further including a side member 36 that extends around the opposing longitudinal side edges (column 21, line 9-column 22, line 17). Said side member provides strength for the edge regions (column 2, lines 48-51). At the time of the invention it would have been obvious to a person of ordinary skill in the art to extend the face sheets of Teare and Emerson around the beveled side edges (as suggested by Lawlis) of Blom's modified board in order to strengthen the side edges as taught by Mathieu above.

Allowable Subject Matter

9. Applicant is respectfully notified that if claim 61 is amended to recite that the uncured sheets are end-to-end joined and placed on a continuous belt as shown in figure 15, claims 61-67 would be placed in condition for allowance.

Response to Arguments

Applicant acknowledges that Blom discloses a method for making blocks of aerated concrete including forming a block of uncured aerated concrete, cutting the uncured aerated

Art Unit: 1791

concrete block in one direction, subsequently cutting the uncured aerated concrete block in a perpendicular direction, and curing the uncured crosscut aerated concrete block in an autoclave.

Applicant argues that Blom is deficient in disclosing securing face layers on core material. This argument is not persuasive since Teare and Emerson, both directed to producing cement containing products, provide ample motivation (improved strength) to secure face sheets to the uncured aerated concrete (uncured cement containing material) of Blom.

Applicant comments that Emerson discloses a method for reinforcing gypsum wallboard comprising layers of cardboard and gypsum plaster. More properly, Emerson teaches obtaining reinforcing effect at or near the surface of a wallboard by applying meshed material to uncured cement material wherein the meshed material may be cotton gauze, wire cloth or perforated paper.

Applicant comments and examiner agrees that Teare discloses a method for making concrete boards. Examiner adds that Teare teaches applying reinforcing fabric (e.g. woven glass fiber yarns) on uncured concrete (uncured cement containing material).

Applicant argues “[n]one of the cited references discloses or fairly suggests the order of the claimed invention” (page 9). This argument is not persuasive since Blom discloses a specific order of cutting steps before curing the cement material in the aerated concrete and the applied secondary prior art to Teare and Emerson teach applying the facing sheet before curing the cement material in the core; it being noted that Blom states: “The receiving support comprises supplementarily a carriage 61 arranged to transport the cut block units from the jack members to together stations in the plant, maybe directly to the autoclave E” (col. 5 lines 29-32).

Art Unit: 1791

Applicant argues that one of ordinary skill in the art would consider autoclaving the fiber glass fabric of Teare or the cotton gauze of Emerson in the autoclave of Blom to be inoperable. This argument is not persuasive. Blom discloses curing the cement material of the uncured aerated concrete blocks at a temperature of for example 200 degrees C in the autoclave. See col. 1 lines 48-50 of Blom. One of ordinary skill in the art would readily understand that the face sheet (e.g. glass fiber fabric, wire cloth) suggested by the applied secondary prior art to have a melting point above the temperature (e.g. 200 degrees C) used by Blom in the autoclave such that there would be a reasonable expectation of success for using such face sheet in the process of Blom.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Chimiak whose telephone number is (571)272-6486. The examiner can normally be reached on Monday-Friday 8:30-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571)272-6486. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1791

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



EAC

JESSICA WARD
PRIMARY EXAMINER

